



- I. These are builder's plans. The following, unless provided for in these drawings, are to be furnished by
- A. Site grading, soil bearing capacity, drainage, utilities, building location, and construction outside of building proper including landscaping. B. Structural engineering design.
- C. Design of heating, plumbing, and electrical systems and the coordination of same in construction.
- 2. The contractor must provide all legal and necessary guard railings, lights, warning signs, etc. During the progress of the work all material in construction shall conform with the requirements of all building and sanitary laws in the locality in which the building is constructed, and shall make work acceptable to the building department at no extra cost.
- 3. The contractor shall obtain and pay for liability insurance covering his work in accordance with the workmen's compensation of the building. The owner shall effect fire, lighting and tornado insurance in proper sums to cover the cost of work in place.
- 4. Where attic spaces have clear height of 30" or more provide access panel not less than 22" x 30". Attic ventilation to be 1/150 net free area.
- 5. Crawl spaces shall be vented with Isq.ft. for each 150. Access door to be 18"x24".
- 6. Interior stairs shall have risers not greater than 8" high and treads not less than 9" wide excluding
- 7. Insulate floors of overhangs and floors over crawl spaces with R-19 (min 6" thick) fiberglass batt insulation. Batt insulation installed in attics and crawl spaces shal have a class III flame spread 76-200, as determined by ASTM E 84. Covering of insulation shall have class I flame spread 0-23.
- 8. Asphalt roof shingles shall be be "Class C" or better, per ASTM E108.
- 9. Floors, walls, and ceilings separating garage from dwelling shall have one-hour fire-rating (5/8" thick type x firecode gypsum board). Doors between garage and dwelling shall be self-closing 1-3/4" solid cor-wood in hollow metal frame. Sills at door openings between garage and dwelling shall not be less than four (4) inches above the garage floor.
- 10. Provide fire stopping at soffits over cabinets and at
- 11. Heating, ventilating and air conditioning equipment shall show a coefficient of performance (COP) and energy efficiency ratio (EER) not less than the values specified in article 4, "The BOCA basic energy conservation code/1978)".
- 12. Heating systems shall be capable of maintaining 70F (2 I C) when outside temperature is -5F (-20C). Cooling system shall be capable of maintaining 78F (25.5C) when outside dry bulb temperature is 94F (34.4C).
- 13. Brick, block and stone masonry shall be protected from freezing for not less than 48 hours after ınstallatıon.
- 14. Provide minimum 6"-8" headroom at interior stairs, measured from tread-nosing. Stairs shall be at least 36" wide and have at least one handrail.
- 15. Railings around stairwells and at balconies shall be designed to resisit a simultaneous vertical and horizontal force of 50lbs per linear foot applied at the top of the handrail.
- 16. Gypsum board shall be fastened with nails conforming to ASTM C514 1-3/8" long, spaced 7" o.c. or No. 6 screws spaced 12" o.c. Provide water resistant gypsum backer board at walls and ceilings at bathtubs and shower.
- 17. Every sleeping room (ie Bedroom, Guest Room, Study, Maids Room, Den) shall have at least one emergency escape window, with sill height not more than 44" above the floor.
- 18. Bathroom windows shall have a min 3 sp. ft. area with one half of that area operable. Bathrooms and Laundry rooms not having natural ventilation shall have mechanical ventilation providing 5 air changes per hour. Using Nutone fans, vent to exterior.
- 19. Thermal resistance of building components:

Building Component	R-Values	U-Values	Code Requirement
Exterior wall (solid)	R-13	0.76	UW = 0.08
Glazıng	2.02	0.50	UG = 0.69
Ext. Doors	2.50	0.40	UG = 0.40
Floors (over crawl)	R-15	0.05	UG = 0.08
Roof/Ceiling	R-30	0.03	UG = 0.05

Note: All materials \$ methods used in construction shall comply with the latest energy conservation code.

- 20. Rails & Guards: Min. hright 30"A.F.F. for railing (38" max) req'd quard height A.F.F. = 36". Note: Open quards shall have ballusters or other const. such that a sphere with a dia. 4" cannot pass through. (see note #15 above for loading req'ments) THE RESIDENCE SHOWN COMPLIES WITH THE FOLLOWING:
 - 1. THERMAL ENVELOPE: A. WINDOW AND DOOR AREA IS LESS THAN 15% OF GROSS WALL AREA.
 - B. WALL INSULATION (R-13) MINIMUM. C. CEILING INSULATION (R- 19) MINIMUM. D. FLOOR INSULATION (R- 19) MINIMUM E. SLAB ON GRADE (R-4, 9) UNHEATED AND (R-7)

2. AIR LEAKAGE:

HEATED SPACE.

A. WINDOWS SHALL HAVE AN INFILTRATION RATE LESS THAN 0.5 CU.FT./MIN

B. SLIDING DOORS SHALL HAVE ANY INFILTRATION RATE LESS THAN 0.5 CU.FT./MIN. PER SQ.FT. OF DOOR AREA.

C. SWINGING DOORS SHALL HAVE AN INFILTRATION RATE LESS THAN 1.25 (F.F.M.) PER SQ. FT. OF DOOR AREA.

D. ALL EXTERIOR JOINTS AROUND WINDOWS, DOORS, UTILITY PENETRATIONS, AT MEETINGS OF WALLS, FLOORS, AND ROOF SHALL BE CAULKED, CASKETED, OR OTHERWISE SEALED.

3. H.V.A.C.

BUILDING SHALL COMPLY WITH ARTICLE 4 IN ENERGY COMPLIANCE MANUAL

MISCELLANEOUS:

APPLICATION.

I. INTERIOR BATHS SHALL HAVE EXHAUST FANS DUCTED TO EXTERIOR.

2. ENTRANCE DOORS, SIDE LIGHTS, AND SHOWER DOORS HAVING GLAZING MUST CONFORM TO NJSA #51. 12-1 REQUIRING SAFETY GLASS IN PANELS THAT MAY BE MISTAKEN FOR A MEANS OF INGRESS OR EGRESS.

NOTES GRADING

- I. THE SITE SHALL BE EXCAVATED, BACKFILLED AND GRADED TO THE EXIST ELEVATIONS AND GRADES INDICATED ON THE DRAWINGS.
- 2. MATERIALS: ONLY MATERIALS CLASSIFIED IN ASTM D 2487 AS GW, GP AND SW AND FREE FROM ROOTS AND OTHER ORGANIC
- MATTER ARE SATISFACTORY. 3. CONSERVATION OF TOPSOIL: TOPSOIL SHALL BE REMOVED TO A DEPTH OF 6 INCHES WITHOUT CONTAMINATION WITH SUBSOIL AND STOCKPILED FOR LATER
- 4. FILL: FILL SHALL BE CONSTRUCTED AT THE LOCATIONS AND TO LINES AND GRADES INDICATED. FILL SHALL BE SATISFACTORY MATERIAL. THE MATERIAL SHALL BE PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF 8 INCHES IN LOOSE DEPTH AND COMPACTED. SOD AND PLANTING AREAS SHALL BE GRADED TO WITHIN 6" OF FINISHED GRADE FOR INSTALLATION OF TOPSOIL BY OTHERS.
- 5. COMPACTION: EACH LAYER OF THE FILL SHALL BE COMPACTED TO AT LEAST 90 PERCENT OF LABORATORY MAXIMUM DENSITY.
- 6. PROTECTION: NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND FROM EROSION, AND ANY SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE, PRIOR TO ACCEPTANCE, SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO REQUIRED ELEVATIONS AND SLOPES.

EXCAVATION

1. PROTECTION

- A.PROTECT TREES, SHRUBS, LAWNS, ROCK OUTCROPPING AND OTHER FEATURES REMAINING AS A PORTION OF FINAL LANDSCAPING.
- B.PROTECT ABOVE AND BELOW GRADE UTILITIES WHICH ARE TO REMAIN.
- C.PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING, OR OTHER METHODS REQUIRED TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO EXCAVATION
- D.NOTIFY ARCHITECT/ENGINEER OF UNEXPECTED SUBSURFACE CONDITIONS AND DISCONTINUE AFFECTED WORK IN AREA UNTIL NOTIFIED TO RESUME WORK.
- E.PROTECT BOTTOM OF EXCAVATIONS AND SOIL ADJACENT TO AND BENEATH FOUNDATIONS FROM FROST

2. EXCAVATION

- A. EXCAVATE SUBSOIL REQUIRED FOR BUILDING FOUNDATIONS, CONSTRUCTION OPERATIONS, AND OTHER WORK.
- B. REMOVE LUMPED SUBSOIL, BOULDERS, AND ROCK UP TO 1/3 CU. YD. MEASURED BY VOLUME. REMOVE ALL TREE ROOTS.
- C.FILL OVER-EXCAVATED AREAS UNDER STRUCTURE BEARING SURFACES IN ACCORDANCE WITH DIRECTION BY ARCHITECT/ENGINEER. COMPACT THESE AREAS TO 95% COMPACTION IN 12"DEEP (MAXIMUM LAYERS).

BACKFILLING

- A. BACKFILL AREAS TO CONTOURS AND ELEVATIONS. USE UNFROZEN MATERIALS.
- B. EMPLOY A PLACEMENT METHOD SO NOT TO DISTURB OR DAMAGE FOUNDATION PERIMETER DRAINAGE, FOUNDATION DAMPPROOFING OR FOUNDATION WATERPROOFING AND PROTECTIVE COVER.
- C. BACKFILL AGAINST SUPPORTED FOUNDATION WALLS. BACKFILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED FOUNDATION WALLS UNTIL SUPPORTS ARE IN PLACE.

D. FILL MATERIAL

- I. INTERIOR SLAB-ON-GRADE: TYPE A FILL, 4 INCHES THICK, COMPACTED
- TO 95 PERCENT. 2.EXTERIOR SIDE OF FOUNDATION WALLS AND RETAINING WALLS OVER GRANULAR FILTER MATERIAL AND FOUNDATION PERIMETER DRAINAGE: SUBSOIL TYPE A FILL, TO SUBGRADE ELEVATION, EACH LIFT COMPACTED TO 90 PERCENT.
- 3. FILL UNDER GRASSED AREAS: SUBSOIL FILL, TO 6 INCHES BELOW FINISH GRADE. COMPACTED TO 90 PERCENT.
- 4. FILL UNDER LANDSCAPED AREAS: SUBSOIL FILL, TO 12 INCHES BELOW
- FINISH GRADE, COMPACTED TO 90 PERCENT 5. FILL UNDER ASPHALT AND CONCRETE PAVING: TYPE A FILL, TO 6 INCHES BELOW FINISH PAVING ELEVATION, COMPACTED TO 95 PERCENT.

THESE PLANS ARE DESIGNED TO CONFORM TO THE FOLLOWING CODES: INTERNATIONAL RESIDENTIAL CODE 2018 (OR LATEST CODE IN USE AT TIME OF CONSTRUCTION) INTERNATIONAL ENERGY CONSERVATION CODE/2018 (RESIDENTIAL) SUBCONTRACTORS SHALL DESIGN BUILDING SYSTEMS TO THE FOLLOWING CODES: NATIONAL ELECTRIC CODE 2017 INTERNATIONAL MECHANICAL CODE 2018 NATIONAL STANDARD PLUMBING CODE 2018 ALL CODES REFERENCED SHALL BE THE CURRENT APPROVED EDITIONS

CONCRETE

- A. FURNISH AND INSTALL CONCRETE FOUNDATIONS AND SLABS AS INDICATED ON THE DRAWINGS.
- 1.01 REINFORCING STEEL
- A. REINFORCING STEEL: ASTM A6 | 5, 60 KSI YIELD GRADE BILLET STEEL DEFORMED BARS; UNCOATED FINISH
- B. WELDED STEEL WIRE FABRIC: PLAIN TYPE,
- ANSI/ASTM A 185. 1.02 CONCRETE MATERIALS
- A. MIX CONCRETE IN ACCORDANCE WITH ASTM C94. CONCRETE TO HAVE 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS WITH 4" MAXIMUM SLUMP.
- 1.03 ADMIXTURES
 - A. AIR ENTRAINMENT ADMIXTURE: ASTM C260.
- 1.04 ACCESSORIES
- A. VAPOR BARRIER: ASTM D2103, 5 MIL THICK CLEAR POLYETHYLENE FILM.
- B.NON-SHRINK GROUT: PREMIXED COMPOUND WITH NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING AGENTS: CAPABLE
- OF MINIMUM COMPRESSIVE STRENGTH OF 3000
- 1.05 POROUS FILL
 - A. FURNISH. INSTALL AND COMPACT POROUS FILL BELOW CONCRETE PAVING
 - IN CONTACT WITH EARTH. THE POROUS FILL SHALL BE OF BANK-RUN GRAVEL 1/4" TO 3/4" MAXIMUM. THICKNESS SHALL
 - BE OF DIMENSIONS
 - SHOWN, BUT NOT LESS THAN 6 INCHES AFTER ROLLING.
- 1.06 FLOOR AND PAVING FINISHES
 - A. CONCRETE FLOORS, AND PAVEMENTS, INCLUDING THOSE SURFACES WHICH ARE TO BE COVERED WITH WATERPROOFING, SHALL BE
 - SCREEDED TO REQUIRED LEVELS, AND COMPACTED WITH POWER DRIVEN
 - FLOATS AS SOON AS CONCRETE HAS BECOME FIRM ENOUGH TO SUPPORT EQUIPMENT AND OPERATORS
 - WITHOUT DRESSING THE SURFACE. COMPACTION SHALL CONTINUE UNTIL
 - CONCRETE IS THOROUGHLY DENSIFIED, BUT NOT TO THE EXTENT OF RESURFACING AN APPRECIABLE AMOUNT OF WATER.

FRAMING SPECIFICATIONS

- I. THE FRAMING CONTRACTOR SHALL CAREFULLY EXAMINE ALL EXISTING CONDITIONS PRIOR TO BIDDING AND SHALL INCLUDE ALL REMOVALS NECESSARY IN ORDER TO ACCOMPLISH THE NEW CONSTRUCTION. IT IS NOT THE INTENT OF TEH PLANS TO INDICATE EVERY ITEM TO BE REMOVED. BUT TO SHOW THE GENERAL SCOPE AND TYPE OF REMOVALS REQUIRED.
- 2. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY IMPROPER PROTECTION AND SHALL REPAIR ANY DAMAGE CAUSED, WITHOUT EXTRA CHARGE TO TEH OWNER.
- 3.THE CONTRACTOR IS TO MAKE ALL POSSIBLE INVESTIGATIONS CONCERNING THE LOCATION OF CONCEALED STRUCTURAL ELEMENTS AND UTILITIES OF SERVICES WITHIN THE PROJECT AREA BEFORE ANY REQUIRED DEMOLITION IS TO TAKE PLACE. THE CONTRACTOR IS TO PROCEED WITH CAUTION DURING ALL DEMOLITION.

CONTRACTORS NOTE:

THESE PLANS ARE FOR ARCHITECTURAL, AND STRUCTURAL PURPOSES ONLY. THE CONTRACTOS IT TO HAVE SUBCONTRACTORS FROM EACH MAJOR TRADE (MECHANICAL, PLUMBING AND ELECTRICAL) DESIGN THE APPROPRIATE SYSTEMS BASED ON THE GUILDELINES PROVIDED IN THESE PLANS. tHE ELECTRICA, MECHANICAL AND PLUMBING ITEMS SHOWN ON THESE DRAWINGS ARE NOT COMPLETE. ALL SYSTEMS AND INSTALATIONS SHALL BE IN CONFORMANCE WITH ALL LOCAL AND NATIONAL CODES

- 4.PROVIDE NEW SUPPORTS OF A SUITABLE TYPE FOR EXISTING PLUMBING, CONUITS, LIGHTING, ETC. WHERE REQUIRED. DUE TO THE REMOVAL OF EXISTING WALLS, PARTITIONS, AND BRACKETS, ETC.
- 5. TEMPORARY PARTITIONS, ARE TO BE CONSTRUCTED PRIOR TO DEMOLITION. THESE WALLS ARE TO BE FLOOR TO CEILING AND COMPLETELY SEALED. CONSTRUCTION SHALL BE OF 31/2" STUDS 16" O.C. W//2" GWB ONE SIDE AND 6 MIL. POLYETHYLENE TAPED, TOP AND BOTTOM (SEE PLANS FOR LOCATIONS).
- 6.SILLS SHALL BE 2-2" X 6" OR AS OTHERWISE INDICATED, PRESSURE TREATED TO RESIST TERMITE INFESTATION, SET ON 1/2" SILL AND SEALER INSULATION. SILLS SHALL BE ANCHORED TO MASONRY WITH 1/3" DIAMETER X 18' STEEL ANCHOR BOLTS 5'-0" O.C.
- 7.ALL JOISTS SHALL BE DOUGLAS FIR OR EQUAL F=1.500 MIN. BENDING STRESS, E=1.760.000
- 8.ALL STUDS SHALL BE DOUGLAS FIR, MIN E=1,210,000, Fc GREATER THAN 520, WITH BRIDGING AT MID HEIGHT ON WALLS OVER 8'-O"
- 9.ALL STRUCTURAL WOODWORK SHALL COMPLY WITH NATIONAL LUMBER MANUFACTURER ASSOCIATION AND WESTERN WOOD PRODUCTS ASSOCIATION STANDARDS AND PRACTICES.
- IO. DOUBLE WOOD JOISTS UNDER ALL PARTITIONS RUNNING PARALLEL TO DIRECTION OF JOISTS.
- WHERE AND AS REQUIRED BY CODE. 12. WHERE JOISTS AND BEAMS FRAME FLUSH, PROVIDE TECO OR EQUAL STEEL HANGERS AND CONNECTORS FOR SUPPORT.

I I . FIRESTOP ALL INTERIOR FRAMING AND OVERHANGS

- PROVIDE MIN. 2 2" X 4" POSTS EACH SIDE OF ALL OPENINGS. PROVIDE 3 - 2" X 4" POSTS EACH SIDE 13. OF HEADERS AND BEAMS OVER 7' SPAN.
- 14. ALL CONCRETE AND FRAME WALLS SHALL BE ADEQUATELY BRACED AND SHORED DURING CONSTRUCTION UNTIL FULLY AND PROPERLY TIED BACK AND CURED. FOLLOW CODE REQUIREMENTS AND GOOD CONSTRUCTION PRACTICES FOR SAME.
- 15. UNLESS OTHERWISE NOTED, PROVIDE:
 - A.DOUBLE HEADER JOISTS AND TRIMMERS AT ALL FLOOR AND SKYLIGHT OPENINGS.
 - B.DOUBLE 2 X 10 HEADERS WITH 1/2" PLYWOOD BETWEEN ALL AT DOOR AND WINDOW OPENINGS. (UNLESS OTHERWISE NOTED ON PLAN).
 - C.2 ROWS OF I" X 3" CROSS BRIDGING PER JOIST SPAN (8'-0" MAX.).
- 16. FLOOR CONSTRUCTION IS TO BE 3/4" TONGUE AND GROOVE UNDERLAYMENT GLUED AND NAILED.
- 17. EXTERIOR SHEATHING TO BE 1/2" CD EXTERIOR PLYWOOD.
- 18. ALL FRAMING TO BE MIN. 4" CLEAR FROM CHIMNEY.
- 19. PARALLMAN LAMINATED STRUCTURAL STRAND LUMBER SHALL BE AS MANUFACTURED BY MACMILLAN BLOEDEL. VERIFY ALL LENGTHS IN THE FIELD PRIOR TO ORDERING BEAMS. EACH BEAM TO BEAR THE APA SERIES 602 EXPOSURE I QUALITY INSPECTION LABEL. DESIGN STRESSES ARE BASED ON 2900 PSI. BENDING WITH DEFLECTION LIMITED TO L - 240 TOTAL LOAD. FOR BEAMS THAT ARE COMPOSED OF MULTIPLE GIRDERS JOIN WITH A MINIMUM OF TWO ROWS OF 16d COMMON NAILS 12" O.C. (LOCATIONS ARE INDICATED 'PL').

20.STRUCTURAL STEEL:

A. ALL STRUCTURAL STEEL SHALL CONFORM WITH ASTM SPECIFICATIONS A-36.

B.UNLESS OTHERWISE NOTED, PROVIDE A 2- BY PLATE BOLTED TO THE TOP FLANGE OF ALL STEEL BEAMS WITH 3/8" DIA. BOLTS STAGGERED AT 2'-0" O.C. RIGIDLY FASTEN ALL CONNECTING RAFTERS AND JOINTS.

21.DESIGN LOADS:

ROOF: 30 P.S.F. LIVE LOAD 20 P.S.F. DEAD LOAD FLOOR: 40 P.S.F. LIVE LOAD 15 P.S.F. DEAD LOAD

				STRUCTURAL ENGINEER	GENERAL NOTES AND SPECIFICATIONS	DRAWING NO.	of
			_		SEEMAN RESIDENCE 26 CRANE PARKWAY, CRANFORD, NJ	<u> </u>	3
					Richard J. Pierce, Architect	3-14-2023	OJECT NO. 1217
DATE	DESCRIPTION E	BY REV			0 Stratford Torrago Cranford Novy Jarony 07016 (009) 779 5077	SCALE AS NOTED	1 2 1 7

ELECTRICAL SPECIFICATION

GENERAL:

ALL ELECTRICAL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND AUTHORITIES HAVING JURISDICTION.

ALL EQUIPMENT SHALL BE NEW AND UNDERWRITERS LABORATORIES (U.L.) APPROVED.

ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. SIZES AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON THE DRAWINGS. FINAL LOCATIONS OF OUTLETS AND EQUIPMENT SHALL BE SHOWN IN ENLARGED DETAILS OR AS APPROVED BY THE ARCHITECT OR HIS REPRESENTATIVE. IT IS NOT WITHIN THE SCOPE OF DRAWINGS TO SHOW ALL THE NECESSARY BENDS, OFFSETS, PULLBOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS WORK TO CONFORM TO THE STRUCTURE, MAINTAIN HEAD—ROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH BUILDING OWNER REQUIREMENTS.

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND SHALL COMPARE THE DRAWINGS WITH EXISTING ELECTRICAL INSTALLATIONS, AND SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WITHIN THE SCOPE OF WORK. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE MADE SUCH EXAMINATION AND TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCE THEREFORE IN PREPARING HIS BID.

CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL TRADES ANY ELECTRICAL REFERENCES ON ARCHITECTURAL DRAWINGS.

VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL DRAWINGS AND INTERIOR DETAILS AND FINISHES. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS, TRIM, PANELING, HUNG CEILINGS, AND THE LIKE AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO THE OWNER.

FURNISH AND INSTALL WIRING FOR EQUIPMENT FURNISHED BY OTHERS AS SHOWN ON DRAWINGS, AND INSTALL MOTOR STARTERS. COORDINATE WITH OTHER TRADES AND DETAILS FOR INSTALLATION. THE TERM "WIRING" AS USED HEREIN INCLUDES FURNISHING AND INSTALLING CONDUIT, WIRE, JUNCTION BOXES AND DISCONNECTS AND MAKING CONNECTIONS. CHECK ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE INSTALLED BY OTHERS. BE RESPONSIBLE FOR PROPER WIRING AND NECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT. CONFORM TO SPECIFIED REQUIREMENTS OF THE EQUIPMENT.

SECURE AND PAY ALL PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK.

THE CONTRACTOR SHALL DO ALL CUTTING AND PATCHING OF THE EXISTING CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.

AFTER COMPLETION OF WORK AND PERIODICALLY AS REQUIRED DURING PROGRESS OF WORK UNDER THIS SECTION, CLEAN UP THE RESULTANT DEBRIS FROM THIS WORK AND REMOVE FROM THE SITE.

LIGHTING FIXTURES:

FURNISH AND INSTALL LIGHTING FIXTURES AS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL DRAWINGS. VERIFY EXACT LOCATIONS OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS.

SEE SCHEDULE FOR FIXTURE SPECIFICATIONS. (OWNER TO SELECT ACTUAL LIGHTING FIXTURES)

PROVIDE REQUIRED ACCESSORIES FOR CEILING TYPES. COORDINATE CEILING TYPES WITH CEILING CONTRACTOR PRIOR TO THE ORDERING OF APPROVED LIGHTING FIXTURES.

FIXTURES SHALL BE SECURELY FASTENED TO THE CEILING FRAMING MEMBER BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, OR RIVETS. CLIPS IDENTIFIED FOR USE WITH THE TYPE OF CEILING FRAMING MEMBER(S) AND FIXTURE(S) SHALL ALSO BE PERMITTED.

FIXTURES WITH BATTERY PACK SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR WITH BATTERY PACK SIMILAR TO LIGHT ALARMS CAT.NO. AM4. COORDINATE WITH FIXTURE MANUFACTURER FOR BATTERY PACK MOUNTING. FIXTURES SHALL BE WIRED TO BE SWITCHABLE. TWO LAMPS IN EACH FIXTURE.

ALL BRANCH CIRCUIT WIRING FOR LIGHTING SHALL BE NO. 12 AWG, TYPE THHN, AND SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING ABOVE THE HUNG CEILING. THE EMT SHALL BE SUPPORTED ACCORDING TO CODES HAVING JURISDICTION BASED ON THE NUMBER AND SIZE OF CONDUCTORS ENTERING AND LEAVING THE BOX.

ALL FLUORESCENT LAMPS SHALL BE WHITE, OR AS SELECTED BY ARCHITECT.

ALL FLUORESCENT BALLASTS SHALL BE ELECTRONIC CBM/ETL OR EQUAL, CLASS P.

ALL INCANDESCENT LAMPS SHALL BE 130 VOLT.

ALL INCANDESCENT FIXTURES SHALL BE EQUIPPED WITH THERMAL PROTECTION.

RE-LAMP ALL INCANDESCENT LIGHTING FIXTURES PRIOR TO OWNER OCCUPANCY.

PANELBOARDS:

ALL PANELBOARDS SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED, AS REQUIRED, IN STEEL CABINETS, CODE GAUGE, WITH STEEL TRIM CONCEALED HINGES, DOORS AND FLUSH TYPE LOCKS, ALL KEYED ALIKE. SIMILAR TO ELECTRO TECH, METROPOLITAN OR ELECTRIC SWITCHBOARDS.

ALL BUSSES, INCLUDING NEUTRAL AND GROUND BUS, SHALL BE MINIMUM 98 PERCENT CONDUCTIVITY, HARD DRAWN COPPER, SILVER OR TIN PLATED JOINTS, AND SIZED ON THE BASIS OF 1000 AMPERES PER SQUARE INCH CROSS SECTIONAL AREA. BUSSES SHALL BE ARRANGED FOR SEQUENCE PHASING.

PANELBOARDS SHALL BE EQUIPPED WITH BOLT-ON MOLDED CASE CIRCUIT BREAKERS OF THE TYPE, NUMBER OF POLES, TRIP SIZES, AND INTERRUPTING CAPACITY AS PER BUILDING REQUIREMENTS, OR AS SHOWN ON DRAWINGS.

CABINETS SHALL BE OF SUFFICIENT SIZE TO ALLOW A GUTTER SPACE OF AT LEAST 6 INCHES ON SIDES, TOP AND BOTTOM.

BACK BOXES SHALL BE CONSTRUCTED OF CODE GAUGE SHEET STEEL, GALVANIZED; TRIMS SHALL BE PRIMED FOR FINISH PAINTING BY OTHERS.

DOORS AND TRIM SHALL EACH BE IN ONE PIECE SO DESIGNED THAT DOORS WILL OPEN 180 DEGREES. DOORS SHALL BE FASTENED TO TRIMS WITH SEMI-CONCEALED, PIANO HINGES WITH NON-FERROUS PINS. TRIMS SHALL BE FASTENED TO BACK BOXES BY MEANS OF SCREWS.

A CIRCUIT DIRECTORY WITH METAL FRAME AND GLASSINE PANEL SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. UPON COMPLETION OF THE PROJECT, THE DIRECTORY SHALL BE TYPEWRITTEN, INDICATING THE SERVICE CONTROLLED BY EACH CIRCUIT FOR NEW AND EXISTING PANELS AND CIRCUITS.

CLEAN, VACUUM AND TIGHTEN ALL CONNECTORS AND CONNECTIONS IN EXISTING ELECTRICAL EQUIPMENT

SEAL PANEL KNOCK-OUTS NOT REUSED.

DISCONNECT SWITCHES SHALL BE QMQB FUSED OR NON-FUSED (AS NOTED OR AS REQUIRED) NEMA HEAVY DUTY EXTERNALLY OPERATED WHERE NOT FURNISHED WITH STARTING EQUIPMENT AND ALL OTHER POINTS REQUIRED BY CODE. FUSES SHALL BE BUSSMAN OR GOULD CURRENT LIMITING TYPE, MINIMUM 100,000 AIC, CIRCUIT BREAKERS MINIMUM 10,000 AIC, UNLESS OTHERWISE INDICATED.

PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT, WHITE LAMICOID WITH 3/4 INCH BLACK LETTERING. PROVIDE HANDLE-LOCKS FOR ALL CIRCUIT BREAKER NIGHT LIGHTS, EXIT LIGHTS WITH BATTERY PACKS.

DEVICES:

DUPLEX RECEPTACLES FOR WALL AND FLOOR CONVENIENCE OUTLETS SHALL BE 2-POLE, 3-WIRE, GROUNDED, 15 AMPERE, NEMA CONFIGURATION 5-15R, HOSPITAL GRADE COLOR AS SELECTED AND AS APPROVED. DUPLEX RECEPTACLES FOR DATA SYSTEM OUTLETS SHALL BE SAME AS CONVENIENCE OUTLETS BUT ORANGE COLOR, AND 3-POLE FOR ISOLATED GROUND INSTALLATION.

SINGLE POLE SWITCHES SHALL BE 20 AMPERE ARROW—HART CAT. #1991; 3—WAY SWITCHES SHALL BE 20 AMPERE, ARROW—HART CAT. # 1993.

SINGLE POLE AND/OR 3 WAY SWITCHES FOR ALL AREAS WITH WALL DIMMERS SHALL BE LUTRON NOVA N-1P-S AND/OR N-3P-S.

BREAKGLASS SWITCH: SIMILAR TO ACME CAT. #798-3, LABEL AS DIRECTED BY OWNER.

MULTIPLE GROUPED DEVICES SHALL BE MOUNTED UNDER A COMMON PLATE, UNLESS OTHERWISE NOTED.

TOGGLE SWITCH OVERLOAD PROTECTION: SIMILAR TO ALLEN BRADLEY CAT. #600-TAX4, HEATER ELEMENT SIZE AS REQUIRED, UNLESS OTHERWISE NOTED.

DEVICE PLATES SHALL BE STAINLESS STEEL, SATIN FINISH, OR AS DIRECTED BY ARCHITECT.

RACEWAYS:

FEEDERS FOR THE NEW PANELBOARDS SHALL BE RUN IN FULL WEIGHT RIGID STEEL, HOT DIPPED GALVANIZED CONDUIT. ALL ELBOWS SHALL BE HOT DIPPED GALVANIZED RIGID STEEL AND FITTINGS SHALL BE OF CAST IRON OR CAST IRON ALLOY GALVANIZED OR CADMIUM PLATED.

BRANCH CIRCUIT WIRING ABOVE HUNG CEILINGS AND IN ACCESSIBLE LOCATIONS SHALL BE RUN IN ARMORED CABLE (BX) TYPE AC OR MC (ARMORED CABLE NOT TO BE INSTALLED FOR DC CIRCUITS), OR ELECTRIC METALLIC TUBING (EMT). THE EMT SHALL BE OF MILLED STEEL TUBING. THE INTERIOR OF THE TUBING SHALL BE COATED WITH A SUITABLE PAINT OR LACQUER, COMPRESSION TYPE CONNECTORS SHALL BE USED FOR ALL EMT CONNECTIONS. SEALTITE FLEXIBLE CONDUIT FOR VIBRATING EQUIPMENT (MOTORS, TRANSFORMERS, ETC.). BRANCH CIRCUIT WIRING IN INACCESSIBLE LOCATIONS SHALL BE RUN IN RIGID STEEL OR IMC.

FIRE ALARM AND SMOKE DETECTION SYSTEM SHALL BE RUN IN RIGID STEEL.

MINIMUM SIZE CONDUIT 3/4", UNLESS OTHERWISE NOTED.

CUT CONDUIT ENDS SQUARE, REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLINGS.

PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY SHALL BE WITHIN THREE INCHES (3") OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT CROSSINGS WHERE RACEWAY SHALL BE AT LEAST ONE INCH (1") FROM PIPE COVER.

RUN ALL RACEWAYS PARALLEL AND/OR PERPENDICULAR TO BUILDING WALLS, HORIZONTAL OR CROSS RUNS IN FULL HEIGHT PARTITIONS AND WALLS ARE NOT PERMITTED.

RUN ALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

CONDUIT SERVING RECEPTACLES AND SIGNAL OUTLETS MOUNTED IN ISLAND STATIONS SHALL BE ROUTED TO WALL MOUNTED JUNCTION BOX (WITH BLANK COVER PLATE) VIA FURRED COLUMNS. CHASE FLOOR AS REQUIRED (IN ACCORDANCE WITH ARCHITECTURAL AND STRUCTURAL REQUIREMENTS).

CONNECT RACEWAY TO MOTOR TERMINAL BOXES WITH FLEXIBLE (SEALTITE) CONDUIT; MINIMUM 18" IN LENGTH AND 50% SLACK. DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.

WIRE AND CABLE:

WIRE AND CABLE SHALL BE COPPER, SIZES AS INDICATED ON DRAWINGS, AND SHALL NOT BE LESS THAN #12 AWG. ALL #8 AWG WIRE AND LARGER SHALL BE STRANDED. ALL #10 AWG WIRE AND SMALLER SHALL BE SOLID. VOLTAGE RATING OF INSULATION SHALL BE 600 VOLTS.

TYPE THHN/XHHW INSULATION SHALL BE USED FOR ALL BRANCH CIRCUIT WIRING. THE AMPACITIES OF THHN WIRE SHALL BE BASED ON THE ALLOWABLE AMPACITIES OF THW WIRE. FEEDER CABLE INSULATION AS APPROVED.

RECESSED LIGHTING FIXTURES IN HUNG CEILING SHALL BE SUPPLIED WITH TYPE TFN INSULATED WIRE IN FLEXIBLE METALLIC CONDUIT IN LENGTHS NOT EXCEEDING 6' FROM ADJACENT JUNCTION BOXES.

FACTORY COLOR CODING FOR WIRE AND CABLE SHALL BE AS FOLLOWS: 120/208V-BLACK, RED, BLUE, WHITE, FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY. 277/480V-BROWN, ORANGE, YELLOW, WHITE, FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY.

GROUND WIRES SHALL BE GREEN.

WIRE COLOR CODING: WHERE COLOR CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING CONDUCTORS (MINIMUM LENGTH 6") IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.

LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. IN RACEWAY OVER 10 FEET IN WHICH WIRING IS NOT INSTALLED, FURNISH FISH WIRE.

LIGHTING AND CONVENIENCE RECEPTACLE POWER WIRING FOR CIRCUITS LESS THAN 100 FEET SHALL BE #12 AWG UNLESS OTHERWISE NOTED. WIRE SIZES SHALL BE #10 FOR CIRCUITS GREATER THAN 100 FEET. NOT MORE THAN THREE (3) LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE PERMITTED IN ONE CONDUIT UNLESS OTHERWISE NOTED.

ALL WIRES SHALL BE IDENTIFIED BY CIRCUIT NUMBERS IN ALL CABINETS, BOXES, WIRING TROUGHS, OTHER ENCLOSURES, AT ALL SPLICES, TERMINATION POINTS, ETC.

CONTRACTOR SHALL OBTAIN FROM OWNER ALL GUIDELINES FOR SIGNAL COMMUNICATION SYSTEM WIRING.

OUTLET AND JUNCTION BOXES:

ALL OUTLET BOXES SHALL BE CODE GAUGE, HOT DIPPED GALVANIZED STAMPED STEEL.

OUTLET BOXES FOR RECEPTACLES AND SWITCHES IN DRY WALL PARTITIONS SHALL BE 4" SQUARE BY 1-1/2" MINIMUM DEPTH AND SHALL BE FITTED WITH SQUARE CORNERED DEVICE COVERS OF DEPTH EQUAL TO THE DRY WALL THICKNESS.

OUTLET BOXES FOR RECEPTACLES IN LOW DRY WALL PARTITIONS SHALL BE SELECTED BY THE ELECTRICAL CONTRACTOR TO FIT THE DEPTH OF THE PARTITIONS SELECTED BY THE ARCHITECT.

ALL ISLAND STATION OUTLETS MUST HAVE AN OUTLET BOX WITH BLANK COVER 12" ABOVE FINISHED FLOORS IN FURRED COLUMNS.

JUNCTION BOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACE. WHEN NECESSARY, RE-ROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.

SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIRE PROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.

LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOOR, INSTALL SWITCH IN SIDE OPPOSITE HINGE, VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.

LOCATIONS INDICATED FOR LOCAL WALL SWITCHES, CONTROLLERS, EMERGENCY PUSHBUTTONS, RECEPTACLES, ETC., ARE SUBJECT TO MODIFICATIONS.

HEIGHTS OF OUTLET FROM FINISHED FLOOR TO CENTER LINE OF OUTLETS SHALL BE AS PER ARCHITECTURAL DRAWINGS. EXCEPTIONS: AT THE JUNCTION OF DIFFERENT WALL FINISH MATERIALS OR MOULDING, OR BREAK IN WALL SURFACE IN VIOLATION OF CODE REQUIREMENTS.

OFFSET BACK-TO-BACK OUTLETS. THROUGH THE WALL TYPE SHALL NOT BE PERMITTED.

GROUNDING:

GROUND ALL CONDUITS, CABINETS, MOTORS, PANELS, AND OTHER EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS OF THE [NATIONAL] [NEW YORK CITY] ELECTRICAL CODE OR LOCAL CODE THAT MAY APPLY.

PROVIDE GROUND WIRE FOR BRANCH CIRCUITING AS INDICATED, MINIMUM #12 AWG.

SUPPORTS:

SECURE ALL SUPPORTS TO BUILDING STRUCTURE AS REQUIRED, SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH, OR AT RIGHT ANGLES TO, WALL.

SUPPORT PANEL, JUNCTION BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON BACEWAYS

ALL ANCHORS, FASTENERS, CLAMPS, ETC. SHALL BE MADE OF STEEL AND SHALL NOT CONTAIN ANY LEAD, WOOD, PLASTIC, ETC.

SLEEVES:

FIRE STOP ALL RACEWAY PENETRATRIONS THROUGH RATED WALLS.

PROVIDE WATERPROOF SLEEVES, AS APPROVED FOR ROOF, FLOOR AND WALL PENETRATIONS. ALL PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS OR PARTITIONS SHALL BE SEALED TO PREVENT THE SPREAD OF SMOKE AND FIRE THROUGH THEM. THE FIRE RATING OF THE PENETRATION SEAL SHALL BE AT LEAST THAT OF THE FLOOR OR WALL INTO WHICH IT IS INSTALLED.

THE FOAM SEALANT SHALL MEET ALL THE FIRE TEST AND HOSE STREAM TEST REQUIREMENTS OF ASTM E-119-73, AND SHALL BE U.L. CLASSIFIED AS A WALL OPENING PROTECTIVE DEVICE AS MANUFACTURED BY CHASE TECHNOLOGY CORPORATION.

TELEPHONE, SIGNAL, DATA AND COMMUNICATION SYSTEM:

PROVIDE ALL OUTLETS AS SHOWN ON PLANS. WALL OUTLETS SHALL BE 4-11/16" SQUARE BOX WITH HOLE, FACEPLATE, AND GROMMET.

CONDUIT SIZES SHALL BE AS DETAILED, MINIMUM 3/4".

COORDINATE WITH SYSTEM MANUFACTURER.

RUN CONDUITS FROM OUTLET TO TERMINATION AS REQUIRED BY RESPECTIVE MANUFACTURER.

CONDUITS TERMINATED IN HUNG CEILING SHALL STUB OUT INTO CEILING TO NEAREST ACCESSIBLE LOCATION MINIMUM 12" WITH BUSHING.

CONNECTION TO EXISTING WORK:

PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES, ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH THE BUILDING OWNER.

CONNECT NEW WORK TO EXISTING IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY THE BUILDING OWNER.

DISCONNECT, REMOVE, OR RELOCATE ELECTRICAL MATERIALS AND EQUIPMENT AS NOTED AND AS REQUIRED BY CHANGES IN CONSTRUCTION.

MAINTAIN CONTINUITY OF ELECTRICAL CIRCUITS TO REMAIN.

CUT AND CAP FLUSH TO SURFACES ALL RACEWAYS TO BE ABANDONED AND DISCONNECT WIRING AT LOAD (EQUIPMENT) AND LINE SIDES.

DISPOSE OF ALL MATERIAL AND EQUIPMENT AS DIRECTED.

MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AFFECTED BY THIS WORK.

REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRED. CLEAN RACEWAY AS REQUIRED PRIOR TO

ALARM AND EMERGENCY SYSTEM SHALL NOT BE INTERRUPTED.

TEMPORARY SHUTDOWNS WHEN REQUIRED SHALL BE MADE ONLY WITH WRITTEN CONSENT OF OWNER AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION AND AT NO ADDITIONAL CHARGE.

ALL REQUESTED WORK FOR TIE-IN TO THE EXISTING EQUIPMENT SHALL BE ACCOMPLISHED AFTER HOURS, ON EXACT DAY AND TIME TO BE DIRECTED BY OWNER.

UPON COMPLETION OF ALL ELECTRICAL WORK, CONTRACTOR SHALL TEST FOR GROUNDS AND SHORTS, TO INSURE PROPER OPERATION OF ELECTRICAL EQUIPMENT. REPAIR OR REPLACE FAULTY EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

GUARANTEE FOR ONE YEAR AFTER ACCEPTANCE BY OWNER ALL WORKMANSHIP AND MATERIALS FURNISHED.

ELECTRICAL CONTRACTOR SHALL SUBMIT REPRODUCIBLE "AS-BUILT" RECORD DRAWINGS FOR BUILDING FILES AT COMPLETION OF THE PROJECT. (SCALE 1/4"=1'-0").

QUANTITIES AND TYPES OF SUBMITTALS SHALL BE AS REQUESTED.

ELECTRICAL ABBREVIATIONS

A AC ACT AFF BG BLDG C CB CKT CL CLG CO CU DISC DN DWG EC EL ELEC EWC FBO EXP EXIST	AMPERE ALTERNATING CURRENT ABOVE COUNTER TOP ABOVE FINISHED FLOOR BREAK GLASS SWITCH BUILDING CONDUIT CIRCUIT BREAKER CIRCUIT CENTER LINE CEILING CONDUIT ONLY COPPER DISCONNECT DOWN DRAWING EMPTY CONDUIT ELEVATION ELECTRICAL ELECTRIC WATER COOLER FURNISHED BY OTHERS EXPOSED EXISTING	FACP FCO FIXT FLUOR FM FS FT G GFI HC HV HZ IC INCAN JB KVA KW LTG MCM MER MTD N	FIRE ALARM CONTROL PANEL FUSED CUT OUT FIXTURE FLUORESCENT FLOOR MACHINE FS BOX (CONDUIT BOX) FOOT OR FEET GROUND GROUND FAULT INTERRUPTING HUNG CEILING HORSEPOWER HIGH VOLTAGE HERTZ INTERRUPTING CAPACITY INCANDESCENT JUNCTION BOX KILOVOLT KILOVOLT AMPERE KILOWATT LIGHTING MAIN CIRCUIT BREAKER THOUSAND CIRCULAR MILLS MECHANICAL EQUIPMENT ROOM MAIN FUSED SWITCH MOUNTED NEUTRAL NOT IN CONTRACT	PH/Ø P PB PH PNL PWR RECEPT RM SH SN SPEC SW TC TEL TV TYP UH UON V VA VIF VT W WP	PHASE POLE PULL BOX PHASE PANEL POWER RECEPTACLE ROOM SHIELDED SOLID NEUTRAL SPECIFICATIONS SWITCH TELEPHONE CLOSET TELEPHONE TELEVISION TYPICAL UNIT HEATER UNLESS OTHERWISE NOTED VOLT VOLT AMPERE VERIFY IN FIELD VAPORTIGHT WATT WEATHERPROOF (NEMA 3R)
EXT	EXTERIOR	NIC NTS	NOT TO SCALE		

NOTE: ALL WORK TO CONFORM TO NATIONAL ELECTRIC CODE 2017
AND BE INSTALLED BY LICENSED ELECTRICIANS

				STRUCTURAL ENGINEER	ELECTRICAL NOTES AND SPECIFICATIONS		of
					SEEMAN RESIDENCE 26 CRANE PARKWAY, CRANFORD, NJ		_1
					Richard J. Pierce, Architect	DATE 3-14-2023	PROJECT NO. 1217
DATE	DESCRIPTION	BY	REV		9 Stratford Terrace, Cranford , New Jersey 07016 (908) 338 5037	SCALE AS NOTED]